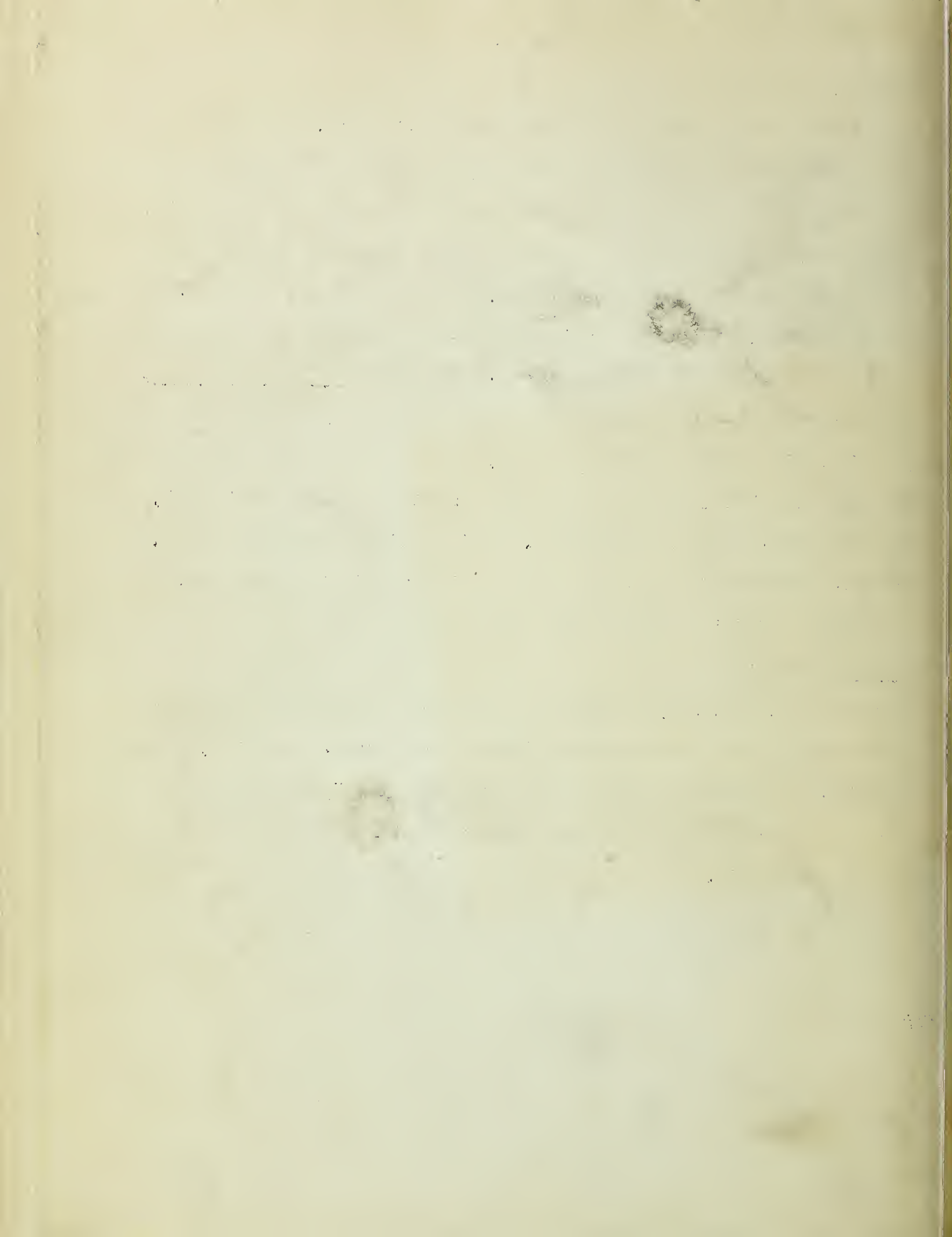


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FORTUNES WASHED AWAY

A Series of
Dramatizations
of Better
Land Use

No. 141 January 4, 1941 1:15 p.m.

"THE BADLANDS OF TENNESSEE"

W·L·W CINCINNATI

United States Department of Agriculture
Soil Conservation Service
Dayton · Ohio

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ORGAN: FANFARE

SOUND: Howling wind...

VOICE (filter mike)

Black blizzards in the dust bowl. Wind -- choking dust.

SOUND: Up on wind...

VOICE

Fire in the great pine forests. Havoc, destruction, waste.

SOUND: Up on wind...

VOICE

Floods rushing down the great valleys. Floods, drowning, killing, wasting.

SOUND: Up on wind...

Soil erosion. The richness of America, washing away!

SOUND: Clap of thunder...

ANNOUNCER

The Badlands of Tennessee: the 141st consecutive episode of Fortunes Washed Away!

ORGAN THEME: I GET THE BLUES WHEN IT RAINS.

ANNOUNCER

From Chattanooga, eastward into the Ocoee River valley, past Parksville reservoir and through beautiful Cherokee National Forest -- this is the way to Ducktown, the great Copper Basin, the badlands of Tennessee. Past Caney Creek powerhouse where water dives down the mountainside to make great turbines whirl, past a great wooden flume that wiggles against mountainous cliffs -- there lies America's monument to destruction.

ORGAN: Mournful music behind...

1875

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VOICE

Beyond the timberline, for hills that once grew trees, lie bare. Out in the open as if you stood on the grass-covered Flinthills of Kansas -- but there is no lush grass. Move along the highway. The trees disappear, then the scraggly brush, and only clumpy broomsedge is left, with great gashes in its sod, as if Big Frog Mountain in a fit of anger had suddenly come to life -- stomping huge holes in the willowy hills. Then even the broomsedge disappears, and here are a million gullies, red bare rock, raw subsoil -- copper red and brutal. This is the great Copper Basin -- red, raw, ragged, as far as the eye can see.

ORGAN: Fade out.

ANNOUNCER

In 1891, the old A. K. & N. Railroad went through to the basin. It remained for a group of smart Englishmen (fade).

FIRST ENGLISHMAN

Incredible, the history of this region. And yet, we stand here ready to launch a mining venture.

SECOND ENGLISHMAN

But why, if other companies failed, are you so sure we can succeed?

FIRST

Let me go back a moment. For a hundred years, the Copper Basin was almost inaccessible. Old Chief Duck and his Cherokee Indians lived in this mountain fastness. Midway in the 19th century white men, led by John Caldwell...

SECOND

Yes, I've heard the name.

1875
The first of the year was a very dry one, and the crops were much injured. The weather was very hot, and the ground was very dry. The crops were much injured, and the yield was very small. The weather was very hot, and the ground was very dry. The crops were much injured, and the yield was very small.

The second of the year was a very wet one, and the crops were much injured. The weather was very cold, and the ground was very wet. The crops were much injured, and the yield was very small. The weather was very cold, and the ground was very wet. The crops were much injured, and the yield was very small.

The third of the year was a very dry one, and the crops were much injured. The weather was very hot, and the ground was very dry. The crops were much injured, and the yield was very small. The weather was very hot, and the ground was very dry. The crops were much injured, and the yield was very small.

FIRST

They fought their way into the basin. Some came out alive, others froze to death, still others died in the harrowing business of mining and hauling copper ore.

SECOND

But how did they get the ore out?

FIRST

At first, they brought the ore out on pack mules, then on ox-drawn wagons, and shipped it to far-off Wales for smelting. For that matter, the Confederate States got their copper in the Ducktown Basin. And after the war, numerous individuals and companies mined here, finally built a dirt road out to the railroad at Cleveland...

SECOND

....and in the end, all went broke. Yet you propose that we take up where all others have failed.

FIRST

I know, I know. But they had haulage costs. The basin is unspeakably rich in ore, and now, with the railroad to solve our freighting problem it is simple, very simple. We have fabulous wealth at our very feet.

SECOND

But do we know that, even with the railroad, haulage will not be too burdensome?

FIRST

There is the point, my friend! We won't haul out great quantities of useless, valueless elements. We'll roast the crude ore right up there in the basin, and ship out only the rich, concentrated metal.

1. The first part of the paper is devoted to a general discussion of the problem.

2. In the second part, we shall consider the case of a single particle.

3. The third part is devoted to the case of a system of particles.

4. Finally, in the fourth part, we shall discuss the results of our investigation.

5. The paper is divided into four parts.

6. The first part is devoted to a general discussion of the problem.

7. In the second part, we shall consider the case of a single particle.

8. The third part is devoted to the case of a system of particles.

9. Finally, in the fourth part, we shall discuss the results of our investigation.

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13. The third part is devoted to the case of a system of particles.

14. Finally, in the fourth part, we shall discuss the results of our investigation.

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16. The first part is devoted to a general discussion of the problem.

17. In the second part, we shall consider the case of a single particle.

18. The third part is devoted to the case of a system of particles.

19. Finally, in the fourth part, we shall discuss the results of our investigation.

20. The paper is divided into four parts.

21. The first part is devoted to a general discussion of the problem.

22. In the second part, we shall consider the case of a single particle.

23. The third part is devoted to the case of a system of particles.

24. Finally, in the fourth part, we shall discuss the results of our investigation.

SECOND

With no furnaces?

FIRST

We need none. The process is simple. We pile the raw ore on the ground, cover it with cordwood, of which you will agree there is an inexhaustible supply -- and ^{ROAST} ~~cover~~ it until it gives up its copper. It will be like gold in our palms.

ORGAN: Mournful music behind...

VOICE

Gold in their palms. They roasted the crude ore with green cordwood, cut from the virgin forest. Great heaps of burning wood and sulfur -- like supernatural blasts -- hot, smoking, acrid. The green cordwood smoked. The heat drove off volatile gases. Fumes settled over the land, bathing hills and vales alike in heavy, sulfurous clouds. Trees died in poisonous fogs. Grasses withered until not a wisp of living vegetation remained. The land became a desert -- red, raw, ragged, as far as the eye can see.

ORGAN: Fade out.

ANNOUNCER

This destruction happened almost over night. And out on the fringes of this desert were landowners who complained to the copper companies (fade)...

SMITH (fading in)

We had our meeting, Freeland, and we've made our decision.

FREELAND

Then let's have it. Adams, here, and I are quite anxious to be fair in every possible way.

ADAMS

That's right.

SMITH

We say something's got to be done. There's a hundred farmers who'll sue you for damages, and they'll collect, too. They can prove the fog kills their crops. Why, the smoke and fumes are so bad that our children get lost on the school grounds.

ADAMS

Oh, come, now...

SMITH

It's a fact. If it weren't that the teacher rings the school bell to guide 'em, they'd fall down the mountainside.

FREELAND

Oh, I understand, Smith, I understand. You know the D. S. C. & I. has paid more damages out of court than in.

ADAMS

So has our company. In fact, I feel that the copper companies have been more than liberal.

SMITH

I'm not arguing that. I'm just speaking for the people. If you don't do something about the fumes, you'll have a thousand more claims. My advice to the farmers is to get the money while they can.

FREELAND

But, Smith...I...I...we had expected you to be more tolerant. We want to meet with your...with your constituents...to talk over this matter of damage to crops in a friendly matter. But you...you're taking a belligerent attitude at the very outset.

SMITH

And I aim to keep on being belligerent. Our claims are in. So far as us landowners are concerned, your mines can either pay up or close up. Goodday, gentlemen.

SOUND: Door opens and closes...

FREELAND

Well, Adams...did you ever get sold down the river like that? So Smith was going to make the farmers see our side!

ADAMS

Those unappreciative rascals. And that double-crosser Smith. Why, our mines are the life-blood of the Basin.

FREELAND

I know, but you'll never make them see that. I'm afraid we'll just have to go on paying damage claims.

ADAMS

I refuse to do so any longer, Freeland.

FREELAND

What do you mean by that?

ADAMS

Our plant is wasting its best product into the air. Speaking for my company, we're going into the sulfuric acid business -- just as soon as we can install our equipment. That will put an end, once and for all, to this monkey business.

FREELAND

I suppose you're right, Adams. Who knows...someday people may look back upon this decision to reclaim the sulfur fumes. Someday they may say: 1907 was the year that put an end to the deadly smoke clouds that, for half a century, had drifted over the mountains of Polk County, Tennessee, and into neighboring Georgia and North Carolina.

ORGAN: Mournful music behind...

VOICE

But the damage had been done. A hundred square miles of Ducktown Basin lay completely denuded of all vegetation. No trees, no gardens, not even a tiny flower in a window box could grow. The ground cover gone, soil erosion was inevitable. For 50 years, rain and wind, wind and rain, have eaten the soil away. Above Copperhill, the Ocoee River drains beautiful Chattahoochee National Forest. Here it runs sparkling clear. Down below Ducktown Basin, whose 60,000 acres still remain without effective vegetative cover, the Ocoee runs copper-red after every rain. And the land is a desert -- red, raw, ragged, as far as the eye can see.

ORGAN: UP AND OUT.

ANNOUNCER

That is the story of Tennessee's great Copper Basin. And now, once again we turn to the Soil Conservation Service of the United States Department of Agriculture, and here is Gene Charles.

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CHARLES

Thank you, _____. I feel that the Copper Basin is one of America's best examples of what soil erosion can do when once it gets out of control. You know, _____, in our erosion control work, we try to get along with nature by using a great deal of vegetative cover on the land.

ANNOUNCER

I think you have told us that vegetation is often the best and cheapest means of erosion control.

CHARLES

So it is, and before going further, I'd like to say that we are not pointing the finger of guilt at anyone for damage done in the great Copper Basin. On the contrary, we take our hats off to many persons and public and private agencies which are slowly helping to change the basin from the desert it is now. The reclamation of sulfurous fumes began there more than 30 years ago. Since then, Mother Nature, in her timeless and tireless way, has been slowly repairing the damage done by thoughtless, yet well-meaning and respected, men.

ANNOUNCER

You don't propose to blame anyone, then, for the destruction of land and vegetation in the Copper Basin?

CHARLES

Certainly not--because you can't indict a whole people. The wastage of timber and minerals and soil in the Copper Basin has been no more of a crime than similar destruction elsewhere. It is only more complete and obvious. We plundered our forests, we're still wasting our mineral resources, and most of our farmers still are not saving their soil as fast as they are wasting it.

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ANNOUNCER

Well, we're a brutal, plundering people, aren't we? But you say there's a hopeful touch in the Copper Basin...

CHARLES

For this reason, _____. There are 10,000 residents in the Basin who are a little tired of outsiders who ridicule them because of the bleakness of their homesites. And they'd like outsiders to know that they are doing what they can to bring vegetation back into the Basin. Vegetation thrives there when it is given a chance. Many residents now have successful gardens. Trees are beginning to grow around the houses.

ANNOUNCER

What kind of trees can grow under such hard conditions -- I should think there would be no soil left for their roots to cling to?

CHARLES

In places there is no soil -- just great heaps of rock and shale. In other places there is some subsoil and certain plants manage to grow -- hardy species, you know -- dogwood trees, sumac, Kudzu vine, honeysuckle, Bermuda grass, and weeds. Thank goodness for weeds there. Anything that will cover the soil is welcome. That is one place where broomsedge is a God-send.

ANNOUNCER

You know, Gene, I'm no chemist -- and I don't think you are either -- but don't they use sulfuric acid in making fertilizer?

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CHARLES

Yes, I was going to mention that. The sulfur element in the ore mined in Ducktown -- that same element that was once so destructive to plant life is now used in the manufacture of fertilizer for nourishing crops and other vegetation. Copper Basin residents use fertilizers and thus increase the growth of their trees, shrubs, flowers, and gardens.

ANNOUNCER

Well, how soon will the Basin become covered once again with vegetation, so that it will resemble the forest wilderness found there more than a hundred years ago?

CHARLES

Wait a minute, _____. You tell me exactly when the millennium is coming -- that would be as easy. It may take a century or two to cover it up, in Nature's way, even if man helps a lot. Maybe it won't take that long. Some of the long-time residents there tell me that each year, the broomsedge and brush and weeds creep inward from the edges with surprising speed. And all over the area, people are planting trees and other things that grow. The U. S. Forest Service has some demonstration plantings in the area. Other federal agencies are cooperating, and local groups are helping.

ANNOUNCER

What local groups, for example, Gene?

1. The first part of the paper is devoted to a discussion of the

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CHARLES

Let me tell you what local farmers are doing in cooperation with F. R. Bradford, the agricultural agent of Polk County. He says that the desire to improve conditions in the Basin has been increasing tremendously in the last five years. Small observational plantings were made first, then increased from time to time until last year 60 acres were set to trees as a further experiment.

ANNOUNCER

That sounds encouraging.

CHARLES

Yes, and here's something else Bradford reports: Within the Basin and around its boundaries there are 205 farms, operated mostly by their owners. These farms are in the county agricultural conservation program. Two of them are unit demonstration farms which means that they are showing neighboring farmers how to rotate crops, manage pastures, use winter cover crops and fertilizers -- all a part of the county soil conservation program. In the last year all but three of these 205 farms combined to use more than two thousand tons of lime. They used nearly ten thousand tons of superphosphate, and they are beginning to use other soil saving methods.

ANNOUNCER

Well, that's a good report from Mr. Bradford -- makes it look as if, within a few generations, the great Copper Basin will cover up -- heal over the scars of soil erosion. Now, thank you, Gene Charles, and we wish also to thank those residents of the Great Copper Basin who helped with the historical background of today's Fortunes Washed Away episode -- particularly Mr. J. S. Akin, postmaster of Copperhill, Tennessee.

ORGAN THEME: I GET THE BLUES WHEN IT RAINS.

CHARLES (on cue)

This is Gene Charles of the Soil Conservation Service, saying goodbye and inviting you to be listening again next week at this same time when we will bring you another story of Fortunes Washed Away.

ORGAN: UP AND OUT.

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